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ABSTRACT

This study sought to determine whether prior membership in the Girl Scouts, Boy Scouts, Campfire Girls, and 4-H related to favorable environmental attitudes, and whether prior members of these groups demonstrated significantly higher measures of these attitudes than non-members. The sample was comprised of 166 students from the College of Education of the Ohio State University. The instrument selected for the measurement of environmental concern was the Syracuse Environmental Awareness Test, Level III, Form D. In addition, a personal data questionnaire was utilized. Statistical analysis of the data found that no significant differences existed between the scores of prior members and prior non-members. No significant correlation was found to exist between duration of prior membership and attitude scores for the study population. On the basis of this study, prior membership in the specified youth organizations would appear to be of little consequence in the identification of individuals bearing environmental attitudes more favorable than the general population. (BT)

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PRIOR MEMBERSHIP IN OUTDOOR-ORIENTED YOUTH ORGANIZATIONS: ITS RELATIONSHIP TO ENVIRONMENTAL ATTITUDES IN YOUNG ADULTS

A Thesis
Presented in Partial Fulfillment of the Requirements
for the Degree Master of Science

by
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CHAPTER I

INTRODUCTION

NEED FOR THE STUDY

Media spend billions annually to discern the characteristics of audiences. The money is considered wall-spent if the data allow them to target an audience successfully. Those which fail to gain an audience join the long list of demises such as Life, Look, The New York Herald Tribune, and the many instant failures in television programming.

The problem is no less pertinent to the environmental communicator. A prophet crying in the desert is worse than useless: he is likely to judged a fool.

Stapp (1969) identified a major problem for the environmental communicator:

> By 1980, eight out of ten Americans will probably live in an urban environment. Consequently, the independent rural-oriented living that once characterized this country's social and political heritage is no longer a dominating influence in the lives of most Americans.

Stapp submitted that the rural life thrust the citizen into direct daily contact with his environment, but now, when the citizen is, to an increasing extent, being asked to make decisions which affect the environment and its future, it is vital that he be motivated to seek the knowledge and awareness which will enable him to make rational decisions.

The environmental communicator has the potential of fulfilling a dual role in the provision of both motivation and factual knowledge. He must first secure an audience, however. To secure an audience, he must have an idea of which publics in the vast myriad of "publics" are likely to give attention to his message. To judge the effectiveness of his efforts, he must know whether he is reaching a few hundred individuals or many millions of people.

If the environmental communicator is successful, he takes nothing away from the formal educator, but effectively uses the particular qualities of mass communication to strengthen the overall environmental education effort. If motivations and favorable environmental attitudes can be enhanced throughout the society, it must follow that the formal educator will be more at liberty to form them in the classroom. As stated by Tanner (1974, p.48):

> . . . the affective domain has historically been a "touchier" subject with school people than the cognitive. While the curriculum guides prepared by school districts and state education departments frequently state that children should develop "positive attitudes and values" regarding this or that, they are rarely more specific about what these attitudes and values should be. This is because the schools serve a public which holds diverse views and values. The schools are not in a position to prescribe attitudes except in the most general terms, which are open to a variety of interpretations.

The problem for the communicator then is to identify a public which is disposed to listen to his message. The message, in turn, must make itself heard through the din of competing messages which typifies the modern era. This study proposes a limited early step in that process.

THE PROBLEM

This study seeks, in a limited sense, to identify a potential public and inquire into the predispositions of that public which might lead its members to give attention to environmental messages.

The potential public chosen for this study was young adult, prior members of outdoor-oriented youth organizations. The specific organizations chosen as representative of outdoor-oriented youth organizations are:

1. Girl Scouts
2. Boy Scouts
3. Campfire Girls
4. Four-H

These organizations have been chosen because, in addition to their publicized activities in conservation, environment, and outdoor education, they have the potential of providing a very large mass of individuals who hold in common the precepts and experiences of membership in similar groups. The current enrollment figures per organization hint at the tremendous numbers of prior members at large in the United States:

Girl Scouts: 2,723,000* enrolled as of Dec., 1974 (Source: Seal of Ohio Council, reply to inquiry, March 16, 1975)

Boy Scouts: Approximately 5,000,000* as of Dec., 1975 (Source: Central Ohio Council, reply to inquiry, March 16, 1975)

Campfire Girls: 400,000* as of Dec. 1975 (Source: Columbus Office, reply to inquiry, March 16, 1975)

Four-H: 4,000,000* as of Dec., 1975 (Source: Ohio Cooperative Extension Service, reply to inquiry, March 16, 1975)

---

* approximate national enrollment

These figures, indicating the current national enrollment of these organizations, total 12,123,000 young people. If no allowance is made for individuals who may belong to two or more of the organizations under consideration, and if the population of the United States is accepted as being approximately 218,000,000 people, it can be seen that roughly one out of every 18 people is currently enrolled in one of these organizations. Though no figures are available on the number of living alumni, it can be inferred that a considerable proportion of the population has such prior membership in common.

The question of whether a predisposition exists for members of this public to give their attention to environmental messages is the main thrust of this study. Though it is not within the scope of the study to measure message receptivity directly, a study is made to determine if, among a selected population, favorable environmental attitudes characterize young adult prior members of these organizations and if prior members hold significantly more favorable environmental attitudes than prior non-members.

A rationale for the choice of these organizations stems from an examination of the histories of these groups and the expressions of their current commitment to environmental education programs.

The Girl Scouts of the United States of America was founded in 1912. Blueprints for Action (1973, p.6), an environmental resource guide produced by the organization through a grant from the U.S. Environmental Protection Agency, describes the history of environmental concern in the Girl Scouts:

> Ecology has been built into the Girl Scout program since its founding in 1912.

> Lou Henry Hoover, wife of former President Hervert Hoover, and herself an early president of the Girl Scouts of the U.S.A., worked to enlarge the scope of the the Girl Scout program in conservation during her years in Scouting. To honor her lifetime work in conservation, Girl Scouts of the U.S.A. in 1944 established the Lou Henry Hoover Memorial which enable councils to set aside a plot of land where young people can learn about the interrelationships of life. The Memorial requires that girls take part in developing the area and planning for its use.

Blueprints for Action documents a continuing concern for conservation and the environment by the Girl Scouts up to the present. Current activity in the field is evidenced by the reply received from Ms. Heidi Hughes, Environmental Education Specialist for The Girl Scouts of the United States of America. In response to a request for the behavioral objectives of the environmental education program of the Girl Scouts, she replied that the objectives were being prepared at the time for new programs. (Appendix A, p.47)

The Boy Scouts of America have been no less active in the realm of conservation and the environment. Founded in 1910, the Boy Scouts of America

> . . . has been in the vanguard of the conservation movement. Through its programs and activities, it has attempted to instill in young people a reverence for the earth and its resources. (correspondence, Feb. 11, 1976. Appendix A, p. 48)

Examples of concern for the environment abound in the lore of Boy Scouting, the numerous conservation merit Badges, the camping programs, and the current publications. Ted S. Pettit, Director of the Conservation Service, Boy Scouts of America sums up the environmental education objectives of present day Boy Scouting:

> . . . our objectives are very similar to Barry Commoner's four laws of ecology as set forth in CLOSING CIRCLE. As a result of going through Scouting, we would hope that

boys would develop an understanding of:

1. Everything is connected to everything else.
2. Everything must go somewhere.
3. Nature knows best.
4. There is no such thing as a free lunch.

(correpsondence. February 11, 1976. Appendix A)

Campfire Girls, Inc. also had its beginnings in the early years of this century. Founded in 1910, the very nature of its name implies a concern for the outdoors. Dr. Luther Halsey Gulick, founder of Campfire Girls wrote at the time of its founding that to seek and preserve beauty in nature would be a major precept of the Campfire Girls. (Book of the Campfire Girls, 1962 p. 7) Though no reply was received to queries for current conservation material from Campfire Girls national offices, environmental education materials produced by the organization have been documented by the ERIC/SMEAC project at Ohio State University (Conservation, 1971 ((ED 049 916)) The continuing attention to environmental preservation is expressed in the Conservation Pledge of the Campfire Girls, Inc.:

> I give my pledge as an American to save and faithfully to defend from waste the natural resources of my country — its soil and minerals, its forests, waters, and wildlife. (Book of the Campfire Girls, 1962. p. 216)

Four-H developed formally as a result of the Smith-Lever Act of 1914. It had its roots in earlier organizations and interests, however. (Encyclopedia Americana 1973, p. 377) stated that one of the precursors of the present Four-H Club was the system of nature study clubs established by Liberty Hyde Bailey, Cornell University naturalist. Conservation and resource management have been continuing concerns for the organization. Although rural in origin, the Four-H movement has expanded into the urban areas. Statistics now show that the majority of members from towns and cities. Modern environmental education objectives of Four-H are:

1. Develop leadership talents in conservation action programs.
2. Achieve an understanding of effective citizenship in conserving natural resources today and for the future.
3. Apply the decision-making process to make natural resources yield the grestest good to the grestest number over a period of time.
4. Appreciate the social and economic values of natural resources to the individual and to the nation.
5. Learn appropriate scientific practices and methods in conservation.
6. Explore career opportunities relating to conservation of natural resources.
7. Gain a cooperative spirit by working together on a conservation education program important to the community, state, and nation.

(1975 Handbook for Local Leaders, National 4-H Awards Programs, p. 18)

These organizations had their roots in the growing conservation awareness of the early 1900's. They have early in their organizational history established concern for the environment as major premises for their respective existences. Though objectives and philosophies in conservation and environmental education have evolved with expanding knowledge, the presence of these programs has been relatively consistent throughout the respective histories of the groups. This thread of environmental concern produces a common denominator which allows these groups to be regarded in a limited sense, as a single category. If this premise can be accepted, then it must follow that membership in any of these groups should have provided the individual with exposure to environmental or conservation concepts. If this exposure succeeded in enhancing or instilling attitudes favorable to environment preservation, a commonality exists in that the environmental attitudes of prior members of these groups should be in evidence at a higher quantitative level than that to be expected in individuals who have never experienced membership in such an organization. It is this hypothesis which this study tests.

SPECIFIC HYPOTHESES

Though the objective of this study is to determine whether prior membership in the aforementioned groups releates to favorable environmental attitudes and whether prior members demonstrate significantly higher measures of these attitudes than non-members, numerous other factors enter into consideration. The influence of leadership experienced by each individual must be assumed to have an effect. Length of time as a member could have an effect. Rank and accomplishment in the organization is certainly demonstrative of salience.

No attempt was made to collect individual data on the adequacy of leadership experienced by each subject. It was suspected that such inquiry would indicate the purpose of the instrument too clearly and influence response. Additionally, the possibility of adequately quantifying such a factor seemed remote within the scope of this study.

An attempt was made to collect length-of-membership data. Results of this data collection appeared adequate for consideration.

An attempt was made, also, to collect data on rank achieved within the organization. Since the ranking systems of the organizations are not parallel, and perhaps because the wording of the question on this factor was confusing, the data collected were inadequate for interpretation.

A final consideration is whether significant difference in the level of environmental attitude exists between groups. Individuals who were members of more than one group are considered to be a discrete group in themselves.

Stated in the null form, the specific hypotheses are as follows:

1. There is no significant difference between the attitude scores of individuals who were prior non-members and the scores of prior members as measured by the Syracuse Environmental Awareness Tests, Level III, Form D.

2. There is no significant difference between attitude scores of prior members of any particular group and any other particular group, including prior multiple members as a discrete group, as measured by the Syracuse Environmental Awareness Tests, Level III, Form D.

3. There is no correlation between length of prior membership in an organization and attitude scores as measured by the Syracuse Environmental Awareness Tests, Level III, Form D.

ASSUMPTIONS

1. Respondents completed the affective instrument and the personal data questionnaire conscientiously.

2. The Syracuse Environmental Awareness Tests, Level III, Form D is a valid instrument for the measurement of environmental attitudes.

3. Norming data on the instrument employed, particularly the data on stability and internal reliability are valid for the population used for this study.

LIMITATIONS

The study is subject to the following limitations:

1. The population of respondents is limited to the students of Education 435, The Ohio State

University, College of Education, Spring Quarter, 1976. Generalizations from the data are limited to the individuals represented. The respondents are not necessarily typical of the population at large.

2. Measures of attitude are entirely dependent upon responses to the instrument employed, thus the validity and reliability of the instrument and the conscientiousness of response are limiting factors. The Syracuse Environmental Awareness Tests, Level III, Form D was normed using data derived from populations of high school students in the Northeast United States. Consequently, use of this instrument to measure attitudes in college students in Ohio may yield data which has been subject to other influences not considered in the test norms.

3. The nature of the instrument is such that, due to the measurement of environmental concern as opposed to other societal concerns, current events reporting by media or recent classroom topics may produce transient instability in relative ascendancy of a particular concern.

4. Though the entire population of the students of Education 435 was to be tested, absentees reduced this population slightly. Although students were not told of the test prior to its administration, information may have passed from the early class members to those tested later, thus influencing their inclination to attend and be tested.

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

As with any investigation, an examination of environmental attitudes must ultimately concern itself with the nature of the data being collected. If the study is to be justified on the basis that findings will be applicable to another task, i.e. environmental communication, it must be shown that these data will be of some utility to that endeavor.

The literature must be reviewed to determine what experts define an "attitude" to be, or failing precise definition, at least an acceptable working assumption of what this quality is.

The question of whether or not attitudes are measureable must be attended to.

Having surveryed representative thought about attitude, the researcher must then investigate the role attitudes may play in the process of communication. How does a communicator utilize attitude information to reach the public? Is there a "public" or many "publics"? What binds groups together and how does a communicator reach an individual when that individual is daily subjected to an incredible barrage of demands for his attention? These tasks will be attempted in a three-part discussion of relevant literature:

1. Attitudes
2. Attitudes and Environmental Communication
3. Conclusions

ATTITUDES

Stapp (1969) stated that one of the major objectives of environmental education is to help individuals acquire attitudes of concern for environmental quality. Stapp stated that his use of the term "attitude" in this context implies a combination of factual knowledge and motivating emotional concern which results in a tendency to act.

Allport (1935, p.8) defined attitude thusly:

> An attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations to which it is related.

Bowman (1972, p.39) cited the following definition of attitudes, among others:

> (An attitude is) readiness for attention or action of a definite sort. (Baldwin, 1901-1905)

> An attitude is a tendency to act toward something in the environment which becomes thereby a positive or negative value. (Bogardus, 1931, p. 62)

The above offerings are a representative sample of numerous definitions couching attitude as a predisposition to display particular overt behavior. Thurstone (1931, p. 2122) supported this view of attitude. He cited research into the voting behavior and drinking behavior of individuals expressing attitudes about prohibition. His research demonstrated that a marked difference in attitude scores relative to prohibition existed between those who voted for prohibition and those who voted against it. A similar positive correlation was found between expressed attitude and overt drinking behavior. Thurstone concluded that comparisons between verbally expressed attitudes and overt behavior yield a positive, albeit not perfect, correlation.

Insko (1967, p.2) stated that more recent definitions of attitude focus on the tendency to evaluate objects favorable or unfavorable and that these definitions entirely discard the notion that any overt behavior is implied.

Perkes (1973, p. 24) cited research by A. L. Strong (Crisis Mentality and the Deteriorating Environment, 1970) in which 95 percent of the respondents to an environmental questionnaire reported that the environment was "important" or "very important" to them. Strong found that, although no one in the study group wanted sub-divisions, factories, etc., next door, many would want them on their land if the price was right.

Roth and Helgeson (1972, p. 27) concluded after a review of research in the affective domain that:

> Statements of behavior with respect to conservation problems do not satisfactorily predict observed behavior consistent with such statements.

This irrelevancy of attitudes to behavior as expressed by these statements carries severe doubt as to the efficacy of any study of attitudes and their relationship to behavior. Summers (1971, p. 2), after a review of commonly used definitions of attitude, concluded the following areas of agreement on attitude and its relationship to behavior. These conclusions perhaps offer some compromise:

> . . . an attitude is a predisposition to respond to an object rather than the actual behavior toward such object.
>
> . . . attitude is persistent over time. This is not to say that it is immutable...
>
> Attitude produces consistency in behavioral outcroppings. Attitude as a latent variable gives rise to consistency among its various manifestations...
>
> . . . attitude has directional quality . . . it has motivational quality.

Should Summers' condensation of attitude definition fail to remove the question of the legitimacy of attitude sampling with the ultimate goal of changing behavior, Fishbein (1967, p. 483) advances the proposition that attitude may be just one of many variables working to produce overt behavior. It may at any time be either the most influential or the least influential, or at any intermediate influence, depending on the situation.

The disagreement over what the true essence of an attitude is creates further question concerning the feasibility of measuring this quality. If it is granted that attitudes do exist and that the affective domain is a legitimate sphere of consideration, some assumptions must be proposed for attitudes to be measured and interpreted.

Fishbein (1967, p. 12) stated that attitude surveys should be regarded as only the crudest approximations of the actual way attitudes exist. He further stated that attitudes change and that investigation made under a given set of circumstances may not always be valid. Thurstone (1928, p. 78) stated that we must accept the discrepancy between the index and the truth, but that this discrepancy is universal as no indexing instrument created by man is perfect.

Verbal experimentation itself is often subjected to attack on the grounds that it is too subjective. Kaplan (1964, p. 163) replied:

> The reluctance to recognize such verbal experiments as truly experimental, or at any rate, the reluctance to allow them scientific validity, stems, I think, from the prejudice that their data are prejoratively subjective. For my part, I have no hesitation whatever in agreeing that "to find out a person's thoughts we must sometimes ask him a question."
>
> The fact that an answer is given is as objective a datum as any scientific observation can yield.

Finally, a resort must be made to the rationales advanced by the authors of the affective test used in this study. The draft copy of the Administrative Handbook for the Syracuse Environmental Awareness

Tests (SEAT) states in defense of the "forced choice" format of the tests:

> Psychologists have found that valid information can be obtained by presenting a number of such forced choices even though the decision may be difficult or very close in some instances. (Gardner, 1973, p. 7)

ATTITUDES AND ENVIRONMENTAL COMMUNICATION

Flynn and Garber (1967, p. 225) though speaking of educators and the preparation of instructional material, raise an important point in terms of impact of communications when they ask, "What kinds of materials are likely to be produced by persons who lack a knowledge of the affective domain?"

One essential service which knowledge of attitude can provide the communicator is the ability to identify a public and to secure that public's attention. Andersen (1971) offered support for this assertion:

> If an audience is heterogeneous with a wide range of receivers in terms of attitudes toward topic, interests, personality characteristics, and predispositions, the communicator could make adjustments. But typically, an audience is homogeneous in terms of at least a few variables. Defining these similarities and plotting a strategy in terms of them can pay significant returns.
>
> A persuader who would be effective must decide where his audience is in terms of attitudes and actions and then discern some means of achieving his goals. (p. 120)
>
> . . . attitudinal sets provide us with expectations that affect the responses of attention, perception, meaning, and interpretation. (p. 50)

The concept of different publics is important for, as stated by Cutlip and Center (1971, p. 128):

> We talk about an "employee public", a

> "community public", an "alumni public" and so forth. There are literally an infinite number of smaller publics within the general public. . . . each issue creates its own public.

Granted this fractional approach to the mass audience, an essential first step for the environmental communicator is to identify a receptive audience. The importance of this can be seen if Festinger's Cognitive Dissonance Theory is accepted. French (1974, p. 161) distills the theory thusly:

> Festinger's two basic hypotheses have to do with the consequences of perceived inconsistency:
>
> 1. existence of dissonance, being psychologically uncomfortable, will motivate the person to try to reduce the dissonance and achieve consonance.
>
> 2. When dissonance is present, in addition to trying to reduce it, the person will actively avoid situations and information which would likely increase the dissonance.

It is the second of these two hypotheses which suggests that persons seek out only that information which supports attitudes already held.

The need to find an audience which can be targeted, based on some common quality which makes it a receptive "public" yet which is pervasive enough throughout the society was discussed by Williams (1968, pp. 70-71):

> Lack of continuous, fine-grained communication among the subgroupings of a social system exposed to rapid changes, especially from the outside, means that when changes finally are communicated the new information is likely to be unexpected and correspondingly difficult to accept and cope with rapidly. If members of each segment of a community are in touch almost exlusively with a communication net confined to that segment, even changes arising from local sources will become known belatedly and fitfully to other portions of the social structure. If the changes are

> of a character to pose problems of adaptation, the more erratic and delayed the communication, the more difficult the subsequent coping behavior is likely to be.

The utility of "having the ear" of a large number of individuals comprising one public is that these same individuals move in the circles of many other publics.

Another benefit which accrues to the communicator who is able to target a large audience is the probability that he will gain the attention of a proportionately large number of "opinion leaders".

Cutlip and Center (1971, pp. 243-244) cited a study by Lazarsfeld, Berelson, and Gaudet to define the role of the opinion leader:

> . . . it became clear that certain people of every stratum of a community serve relay roles in mass communication of election information and influence.

Cutlip and Center further quoted the late political scientist, V. O. Key in regard to opinion leaders:

> . . . the talkers, the persuaders, the speculators, the philosophers, the advocates, the opponents -- mediate between the world of remote and complex events and the public.

Another possibility for the communicator, if he can effectively reach an audience and bring latent attitude into the decision-making process, is the function of assisting in the evolution of new social reinforcers. To the environmental communicator, this translates into tremendous impact in the generation of an environmental ethic for society. Staats (1955, pp. 376) gave examples of existing social reinforcers such as attention, acclaim, respect, honor, money, expensive cars, etc. According to Staats, these rewards are delivered contingent upon some types of behavior and withheld contingent on other behaviors.

Staats concluded that society's reinforcer system and its rules of application will determine prevalent behavior. He further concluded that the attitudes which are held by society play a tremendous part in the structure of this reinforcer system.

Though a diligent search of pertinent literature produced no documentation of study bearing directly on this investigation, some research was found on the effects of groups on their members attitudes and the relationship of attitude to the groups in which membership is desired. Kalins and Abelson (1970, pp. 57-58) cited a study of attitude persistence among Boy Scouts in the face of counter-persuasion. A questionnaire asking how members of several Boy Scout Troops valued their membership was administered. On the same questionnaire were inquiries into how much the boys enjoyed the outdoor activities of their troop. A week later an adult not familiar to the members delivered a speech to the groups suggesting that their time would be better spent learning about things other than the outdoors. Findings showed that those who indicated they valued their membership higher were little swayed by the talk; those who cared less about belonging were influenced much more.

Andersen (1971, p. 79) states:

> To the degree that people ... voluntarily associate themselves with given groups and employ the standards of selected groups or individuals, these factors are key guides in the analysis of an audience. In addition to examining the characteristics of an audience, the communicator may profit from the specific forces that produced this audience. Only certain people elect to attend a lecture on birdwatching.

Zimbardo and Ebbeson (1970, pp. 22-23) list some of the effects of groups on individuals:

> - a person's opinions and attitudes are strongly influenced by groups to which he belongs and wants to belong.
>
> - people who are most attracted to a group are probably least influenced by communications which conflict with group norms
>
> - resistance to a counter-norm communication increases with salience of one's group identification.

If Summers' assertion that attitudes are persistent over time is accepted, it becomes apparent that prior-group membership may be very significant in the identification of an attentive audience. Another important factor in the identification is the salience of the individual's group identification.

It follows from current research in communication effectiveness that the message must be meaningful to the receiver. It must gain primacy over the barrage of pleas for attention which batter contemporary individuals. Recent history is replete with examples of media which failed in their attempts to be "all things to all people". Their demise may be explained by their failure to divine the selectiveness growing out of the increasing information flow. Shafer and Disinger (1975, p. 2) reported that environmental educators attending the 1975 Snowmass, Colorado conference on the status of environmental education concluded:

> That an environmental education specialist should orient his/her efforts toward stated needs of the audience, assuming that
>
> a) audiences learn best when content is directly relevant to them, and
>
> b) non-formal education programs must be geared toward the needs of the audience, or there will be no audience.

Knowledge of the attitudinal set of one's audience must aid, if not insure this essential personalization.

CONCLUSIONS

The review of literature relating to the nature and properties of attitudes graphically portrays the wide disagreement on how attitudes shall be defined. If attitudes are directly related to behavior, then, by all means, research into attitude identification should proceed at all speed. It must follow that if the attitude correlated to a selected behavior and standing in a causal relationship to that behavior can be identified, that attitude must eventually become subject to attempts to enhance it or change it. In this relationship, the knowledge of an individual or group's attitudes toward the environment would be of great value to an adept communicator.

If attitudes are in no way causal of action or in no way correlated with behavior, the entire question of how to utilize attitude information is moot. Attitude surveys provide possibly interesting diversion to theoreticians and pure social scientists, but their application is non-existent in the practice of effective environmental communication.

A middle ground can be struck, however. Summers' view of attitudes as predisposing but not forcing a behavior in response to an object, and his view of attitude as a latent variable which gives rise to consistency in behavior and motivation to respond set attitude as a contributor to behavior. Fishbein also advances this view of attitude as merely one of many variables which serve to determine behavior in a given situation. Upon this middle ground is established the basis for this study. The affective domain of human behavior is still worthy of identification and use in audience targeting.

Another storm of debate arises over what is being measured in attitude tests, how accurate the measure is, or whether, in fact, anything is being measured at all. Perkes (1973 p. 28) concludes that the term "attitude" for the purposes of his study will mean whatever is measured by paper and pencil tests commonly designated as "attitude tests". The corollary to Perkes' posit must be that tests commonly designated as attitude tests are, in fact, measuring attitudes.

The implications of current communication research as reviewed here, for this study, lie in the fact that certain tasks face any communicator, no less the environmental communicator.

A first step must be to identify a discrete public. Research and history have shown the futility of trying to broadside the modern mass audience. Attitudes can be one of the common denominators of this public. Attitudes can also be the porthole through which the communicator penetrates the individual's screen against information vying for his attention. If the message can be introduced in consonance with the individual's own mental set, it is unlikely to be rejected and ignored as dissonance.

If the communicator is adept enough to target a large enough public, he improves his chances to net a larger number of opinion leaders who carry messages into the other publics of which they are members.

The ultimate goal of environmental communication is to enhance latent attitudes favorable to the environment so that new social reinforcers are generated in the society. These new reinforcers, springing in part from common societal attitudes, form a new environmental ethic for a society.

The review of literature reveals in the final analysis several concepts critical to the thesis topic, though no parallel research or prior investigation into the topic was found. The concepts which form an essential part of the theoretical framework of this study and which have been stated in the literature reviewed are:

1. Attitudes are measureable, albeit imperfectly so.
2. Attitudes are persistent over time.
3. Groups affect the attitudes of their members.
4. Attitudes influence the receptivity of an individual for any given message.
5. Knowledge of the audience is essential for effective communication. Conversely, knowledge about a public, including that public's attitudes about the topic of the communicator's message allows the communicator to choose an audience likely to give attention to his message and disseminate it further throughout the society.

Prior members of the groups selected for this study, i.e. Girl Scouts, Boy Scouts, Campfire Girls, and 4-H are a public by definition. This is a large public, which, if attitudinally set to be receptive to environmental communications, holds great potential for the reception and dispersion of environmental messages.

CHAPTER III

PROCEDURES

Procedures utilized for this study are presented in this chapter in five categories:

1. Overall design;
2. Population;
3. Instrumentation;
4. Data collection procedures;
5. Statistical analysis.

OVERALL DESIGN

The purpose of the investigation was to measure the level of environmental concern in a population of young adults. Information collected was used to determine if significant differences in level of environmental concern existed between individuals who were prior members of outdoor-oriented youth organizations and individuals who were prior non-members.

The organizations chosen to represent the category of outdoot-oriented youth organizations, as noted in Chapter I, were:

1. Girl Scouts of the United States of America;
2. Boy Scouts of America;
3. Camp Fire Girls, Inc.;
4. Four-H.

Additional investigation was made to determine if duration of membership correlated to higher levels of environmental concern. Tests were also made to determine if membership in any particular group indicated higher levels of environmental concern than any other group. Individuals who were multiple members were categorized as a discrete group.

POPULATION

The population chosen for the study was comprised of those students enrolled in Education 435 at The Ohio State University Spring Quarter, 1976. Education 435, "Theory and Practice in Secondary Education" is described as:

> A laboratory field experience course introducing topics, problems, and skills common to prospective secondary school teachers. (The Ohio State University Bulletin, 1974-1976.)

As such, the population was made up of individuals pursuing a wide range of major subject areas pertinent to secondary school teaching. Although not a random sample, for the scope of this study the use of such a population allowed the researcher to administer the attitudinal instrument in a classroom situation where some extraneous variables could be controlled and bias introduced by non-returns of direct-mail sampling could be suppressed. Additionally, as a function of the varied scholastic pursuits of the students in this course, systematic exposure to environmental subject material as a population could be eliminated as a source of bias.

The number of individuals receiving and completing the instrument totaled 166. Ages of the subjects ranged from one individual of 18 years to one individual of 43 years. Mean age was 22.75 years. The modal age was 21 years (50 individuals).

Six class sections of Education 435 were offered Spring Quarter of 1976. All six sections were tested.

INSTRUMENTATION

The instrument selected for the measurement of environmental concern was the *Syracuse Environmental Awareness Test, Level III, Form D.* (Appendix B). According to Wheatley:

> The Syracuse Environmental Awareness Tests —Level III were developed to "measure knowledge of and concern for man's environment among high school students and adults."

Wheatley goes on to state that form D of the *Syracuse Environmental Awareness Tests, Level III* (SEAT) by Gardner, Kleinke, and Cohen evaluates attitudes toward environmental problems. Form D contains 105 paired statements contrasting problems in seven environmental areas, i.e.:

1. Pollution of air;
2. Land, and
3. Water;
4. Noise pollution;
5. Population;
6. Science, growth, and technology (unchecked and destructive)
7. Ecological Relationships

with other types of social problems such as drug use, welfare, civil rights, etc. A high total score indicates a greater concern for environmental issues than for other societal concerns.

This particular instrument was chosen because, in addition to its applicability to adults, norming data indicate that it is particularly stable and reliable, the internal consistency reliability yielding a KR-20 of .95 (Wheatley) as computed on a population of 11th grade high school students in the Northeastern U.S. A t-test for significant differences in scores of morning vs. afternoon classes used for this study indicated no significant difference with $p > .100$.

In addition to the instrument prepared by Gardner, Kleinke, and Cohen (SEAT D), a personal data questionnaire was attached (Appendix B). Only data from questions 9 and 10 were eventually used. Question 11 was intended to gather data to be used for comparisons of rank vs. score but failed to gather interpretable information. All other questions were included to camoflage the intent of the study and reduce the subjects' inclination to answer in a manner which they may have discerned to be desired by the researcher.

Before administration of the test, copies were made available to representatives of each group i.e. Girl Scouts, Boy Scouts, Campfire Girls, and 4-H, for validation. Copies were hand-carried to:

1. Seal of Ohio Girl Scout Council, Galloway, Ohio;
2. Central Ohio Council, Boy Scouts of America, Columbus, Ohio;
3. Central Ohio Office, Camp Fire Girls, Inc., Columbus, Ohio;
4. Ohio Cooperative Extension Service, 4-H Office, The Ohio State University.

The researcher met with the professional staff member most closely associated with the organization's local environmental and conservation program and asked that the individual review the test for clarity, pertinence to the study, and objectionable material. All individuals reviewed the instrument in its final form with the attached personal data questionnaire. No objections were reported.

DATA COLLECTION PROCEDURES

Data were gathered by administration of the SEAT D instrument with its attached personal data questionnaire to six classes of Education 435. Testing was completed in three days, each class section being tested at a time designated by the instructor. Four of the classes met during the morning and two met during the afternoon. Class size varied from a low of 16 to the largest with 32 students.

Instructors were asked not to mention the test prior to its administration in order to avoid absenteeism resulting from the knowledge that the class period would not be utilized for instruction in the subject matter of the course. The subjects were not made aware of the purpose of the investigation either by the instructor or by the researcher.

Subjects were instructed to respond to the personal data questionnaire by writing their replies directly on the page in the spaced provided. Responses to the SEAT D instrument were recorded by the subject on machine-scorable answer sheets. The personal data questionnaire was identifiable with the machine scorable form by the common serial number appearing on each. Though subjects were asked to return all forms together and attached with a paper clip provided, this common number insured against separation of personal data from attitude data of each individual.

Subjects were advised verbally and in writing on each test form that names were not solicited and that no attempts would be made to associate data with individuals.

The researcher was introduced promptly at the start of each class period, and, after distribution of materials and brief standardized instructions, subjects were allowed to procede with the instrument. Available time for completion of all questions, with minor variation from class to class, was no less than 45 minutes. All materials were voluntarily returned complete prior to the end of class in all instances. Most individuals in each class completed the instrument in 30 - 35 minutes. Subjects were permitted to leave the room after completion of the instrument but could not leave the building without returning since another hour of instruction followed the first hour of the two-hour class period. This factor was considered in that it minimized the inducement to rush through the test for the reward of early release from class.

All class sections were tested within the same building in three similar classrooms, each room being common to two sections meeting at different times. The seating arrangement of all three classrooms was similar. There were no particular visual distractions existent in any of the three rooms. No evidence of unusual or distracting variables was noticed during the time of testing. Class demeanor was sedate and apparently normal.

Questions posed to the researcher during the administration of the instrument followed no recognizeable repetitive pattern. In all cases, questions were infrequent and readily resolved.

STATISTICAL ANALYSIS

Machine-scorable forms bearing data collected via the Syracuse Environmental Awareness Test, Level III, Form D (SEAT) and data coded onto the form from answers given to the personal data questionnaire by the respective individual were scanned by machine at the Center for Testing and Evaluation at The Ohio State University. Answers to SEAT and the personal data questionnaire were punched on IBM cards by the scanner system. Cards were used for further electronic data processing, all test data and personal data for each respondent having been converted to card format.

Through consultation with programming and statistical staff at the Instruction and Research Computer Center of The Ohio State University, a program was devised to generate scores for all individuals. Further statistical analysis was accomplished by accessing Statistical Package for the Social Sciences (Nie, et al., 1975), a computer program recommended for this study by the Instruction and Research Computer Center.

General statistical descriptions were calculated via a subprogram of Statistical Package for the Social Sciences (SPSS). Output from these computations yielded statistics including: mean, variance, range, standard error, standard deviation, kurtosis, and skewness. These statistics were computed on the entire population, on prior non-members as a group, and on each group of prior members.

A t-test for significance of the difference in means of scores from prior non-members and scores of prior members was applied by manual calculation using the formula given by Kolstoe (1973, p. 221):

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S_{D\bar{X}}}$$

where $\bar{X}_1$ = mean non-member score

$\bar{X}_2$ = mean member score

$S_{D\bar{X}}$ = standard error of difference in means of non-members and members.

The SPSS "One-Way" (Nie, et al., 1975, pp. 424-425) subprogram was utilized for one-way analysis of variance between scores of prior members of each organization, prior multiple members, and prior non-members. The subprogram's analysis produced an F ratio and probability level providing a basis for determining if significant difference existed in inter-group comparisons. Results also were used to determine the legitimacy of further multiple comparisons via the t-test.

In order to analyze for relationship of member-years vs. attitude score, the SPSS "Pearson Corr" subprogram (Nie, et al., 1975, p. 280) was applied to the data. A Pearson Product - Moment Correlation Coefficient was produced for each group. Member years were entered in grouped data form, i.e.: 1-2 years; 3-4 years; and 5 or more years as a member. Membership duration data for individuals reporting membership in more than one organization were entered as quantities equal to the greatest number of member years listed by the individual in any single group. Only scores of individuals reporting prior membership were considered in this analysis.

CHAPTER IV

ANALYSIS OF RESULTS

This chapter reports the study of results in two sections. The first section presents those statistics generally descriptive of the population and the designated subgroups. The second section treats statistical results relative to the three null hypotheses presented in Chapter I. Statistics relative to each hypotheses form subsections of this second section.

The level of probability at which the null hypothesis could be rejected in all cases for this study was set at the .05 level.

GENERAL DESCRIPTIVE STATISTICS

Table 1, p. 32 displays statistics generally descriptive of the sample population as a whole and statistics pertinent to each group derived from the population.

The mean statistic is self-explanatory.

S.E. refers to the standard error of the mean computed for each category.

Variance is self-explanatory, is the square of the standard deviation.

Kurtosis is normal at a value of zero. Positive values indicate a distribution more narrow that a normal distribution, while negative values indicate flatter distributions. Nie, et al. (1975, p. 185) stated the following as the SPSS computing formula for kurtosis:

TABLE 1

GENERAL STATISTICS

	$\overline{X}$	S.E.	S.D.	Variance	Kurtosis	Skewness	Range	No.
Population	60.988	1.601	20.622	425.248	-0,411	-0,194	92	166
Non-member	57.255	3.208	21.996	483.803	-0.683	0.022	100	47
Mult. member	65.444	6.562	19.686	387.528	-1.301	0.382	55	47
Girl Scouts	63.800	3.017	19.082	364.113	-0.260	-0.170	79	40
Boy Scouts	60.756	3.202	21.483	461.507	-0.099	-0.410	90	45
Camp Fire Girls	57.545	4.687	15.546	241.673	0.162	-0.832	53	11
4-H	66.071	5.857	21.914	480.225	-1.303	-0.225	67	14

$$\text{kurtosis} = \frac{\left\{[\sum_{i=1}^{n} X_i^4 - 4\overline{X}(\sum_{i=1}^{n} X_i^3) + 6\overline{X}(\sum_{i=1}^{n} X_i^2)] - 4\overline{X}^3(\sum_{i=1}^{n} X_i)/n\right\} + \overline{X}^4}{\left\{[\sum_{i=1}^{n} X_i) - N\overline{X}^2]/(N-1)\right\}^2}$$

Kurtosis values for the study groups are low.

Skewness, like kurtosis, takes a value of zero in this table when the distribution is a completely symmetric bell curve. A positive value indicates scores are clustered more to the left of the mean with extreme score to the right. A negative value indicates clustering to the right with extreme scores to the left of the mean. Nie, et al., (1975, p. 184) stated the following as the SPSS computing formula for skewness:

$$\text{skewness} = \frac{\left\{[\sum_{i=1}^{n} X_i^3 - 3\overline{X}(\sum_{i=1}^{n} X_i^2) + 3\overline{X}^2(\sum_{i=1}^{n} X_i)] / n\right\} - \overline{X}^3}{\left\{[(\sum_{i=1}^{n} X_i^2) - N\overline{X}^2] / (N-1)\right\}^{3/2}}$$

Skewness values for the study groups are low.

"NO." refers to the number of observations in each group.

STATISTICAL RESULTS AND SPECIFIC HYPOTHESES

First Null Hypotheses

H_o 1: There is no significant difference between the attitude scores of individuals who were prior non-members of the specified groups and the scores of prior non-members as measured by the Syracuse Environmental Awareness Tests, Level III, Form D.

This hypothesis was tested through use of a t-test for significance of the difference in means of the combined member scores vs. the non-member scores.

Using the formula $t = \frac{\overline{X}_1 - \overline{X}_2}{S_{D\overline{X}}}$ with:

$\overline{X}_1$ = mean non-member - 57.255

$\overline{X}_2$ = mean member = 62.462

$S_{D\overline{X}} = 3.504$

A t value of 1.486 was calculated with 166 degrees of freedom.

On the basis of this calculation, significant differences were not shown at the .05 level. Indeed, at 166 degrees of freedom, with this t value, probability could not be located on a standard table of the distribution of the t statistic (Kolstoe, 1973, Table G, p. 338), the probability being too large. The test of this hypothesis failed to reject the null hypothesis (H_o1).

Second Null Hypothesis

H_o2: There is no significant difference between attitude scores of prior members of any particular group and attitude scores of prior members of any other particular group, including multiple members as a discrete group, as measured by the Syracuse Environmental Awareness Test, Level III, Form D.

This hypothesis was tested with the SPSS subprogram "One-Way". The subprogram subjected data from all groups to a one-way analysis of variance. Table 2, below displays the results of that analysis.

TABLE 2

ANALYSIS OF VARIANCE

SOURCE	D.F.	SUM OF SQUARES	MEAN SQUARES	F	p.
Between Groups	5	1644.3125	328.8632		
Within Groups	160	68521.7500	428.2607		
Total	165	70166.0625		.768	.573

Reference to Table 2 shows that a significant difference does not exist statistically among the scores of the groups considered by the analysis of variance. The computed F ratio and the probability level resulting from this test do not allow the rejection of the null hypothesis (H_o2). Further intergroup t-tests for significant difference between group pairs are illegitimate with a statistically non-significant F ratio.

Third Null Hypothesis

H_o3: There is no correlation between length of prior membership in the designated organizations and attitude score as measured by the Syracuse Environmental Awareness Tests, Level III, Form D.

The SPSS subprogram "Pearson Corr" was used to test this hypothesis. Table 3, below, gives the results of the analysis.

TABLE 3

PEARSON PRODUCT - MOMENT CORRELATION COEFFICIENT
MEMBER - YEARS vs. SCORE

	r_{xy}	p
Multiple members	.3519	.353
Girl Scouts	-.0598	.714
Boy Scouts	.0522	.733
Camp Fire Girls	-.0522	.879
4-H	.1008	.732

Table 3 shows that significant correlations for member-years vs. scores were not obtained for any of the groups considered. This failure to obtain a significant r in all circumstances considered indicates that the statistical test has failed to reject the null hypothesis (H_o3).

Consultation with statistical advisory staff from the Instruction and Research Computer Center at The Ohio State University indicated that underlying assumptions for the statistic used in each case were either not violated or not violated to the extent of exceeding the robustness of the statistic.

CHAPTER V

SUMMARY, INTERPRETATION OF RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Sections of this chapter will deal with a summary of the study, interpretation of results of the investigation, possible conclusions, and recommendations for further investigation into the problem.

SUMMARY

The purpose of the study was to test three null hypotheses concerning prior membership in conservation-oriented youth organizations. The four organizations selected as representative of these organizations were:

1. Girl Scouts of the United States of America;
2. Boy Scouts of America;
3. Camp Fire Girls, Inc, and
4. 4-H.

The specific hypotheses to be tested were:

H_o1: There is no significant difference between the attitude scores of prior non-members and the attitude scores of prior members as measured by the affective instrument employed in ths study.

H_o2: There is no significant difference between attitude scores of prior members of any particular group and any other particular group, including multiple members as a discrete group, as measured by the affective instrument employed in the study.

H_o3: There is no correlation between length of prior membership in an organization and attitude scores as measured by the affective instrument employed in the study.

The instrument employed in the study was the Syracuse Environmental Awareness Tests, Level III, Form D, (SEAT) an affective instrument of 105 forced-choice questions juztaposing environmental concern with various other societal concerns. The instrument was recommended for use with subjects of the age group senior high school through adult. In addition to the SEAT instrument, a personal data questionnaire was attached to gather data on prior membership in the selected organizations and duration of that membership. Norming data for SEAT indicated a high level of internal reliability for the form used. A Kuder-Richardson Formula 20 reliability coefficient of .95 (Wheatley) was calculated for the SEAT Form D. Stability for the instrument was also determined to be excellent.

The population selected for the study was the Spring Quarter, 1976 enrollment of students in Education 435, Curriculum and Foundations, at The Ohio State University. The population, though neither a random sample nor necessarily typical, offered individuals with a wide range of educational pursuits within the realm of the education major. The use of this population also allowed the instrument to be administered in a classroom environment where extraneous variables could be equalized among subjects to a great extent. Bias introduced by systematic non-return could be suppressed also. All six sections of Education 435 were administered the instrument and 166 individuals completed the instrument.

The following statistical analyses were performed on the data:

1. A t-test for significant difference in mean scores of prior members and prior non-members;

2. One-Way analysis of variance for determination of significant difference in inter-group comparisons including multiple prior members and non-members as groups;

3. A Pearson Product-Moment Correlation Coefficient was computed to determine if environmental attitude scores covaried with member-years.

INTERPRETATION OF RESULTS

Prior Member Scores vs. Prior Non-Member Scores

No significant difference was found to exist between the scores of prior members and prior non-members. On this basis the null hypothesis (H_o1) could not be rejected. Since this test was calculated with paper and pencil and the results entered into a table for analysis of significance, the exact level of significance could not be determined as was the case with computer analyzed tests (See page 34). However, a $p > .10$ is certain for a two-tailed test. Though no generalizations are intended beyond the population involved in this study, it can be seen that, for these individuals, as measured by the SEAT instrument, membership in one or more of the selected organizations permits no statistical inferences to be made to the effect that membership produces more enhanced and lasting environmental attitudes than non-membership.

Particular Group Scores vs. Other Particular Group Scores

No significant difference was found to exist when inter-group score comparisons were made via the one-way analysis of cariance (F test). The null hypothesis (H_o2) was not rejected on the basis of this statistic. Of particular interest was the computer generated significance level of $p=.573$. This large p resulting from the F ratio of .768 indicates a very low level of inter-group variance.

(See Table 2, p.35). Since the groups encompassed in this analysis included non-members as a group and multiple members as a group, the failure of rejection of the first null hypothesis is reinforced and the possible influence of multi-group exposure is considered. For the study population, no statistical inferences can be made as to particular membership being coincidental with particular scores on the SEAT instrument. No further paired inter-group comparisons could be legitimately made having obtained an F ratio of such low significance.

Correlation of Membership Duration to Attitude Scores

No significant correlation was found to exist between duration of prior membership and attitude scores for the study population. Pearson Product-Moment Correlation Coefficients for member-years vs. score were calculated for all groups and for multiple members considered as a discrete group (See Table 3, p. 36). In all instances r_{xy} indicated no significant correlation between these factors. On this basis the null hypothesis (H_o3) could not be rejected. Due to the very low significance levels generated by computer analysis, for the population under study, it is apparent that no statistical inferences can be made as to duration of prior membership covarying with attitude scores as measured by the SEAT instrument.

CONCLUSIONS

Kleinke and Gardner (1972, p. 11) list the following statistical results, among others, from their norming of SEAT, Form D on 1,252 individuals in the Northeastern U.S.:

Mean - 57.8

S.D. - 20.3

When equivalent statistics derived from this study population are compared (Mean = 60.988; S.D. = 20.622) it can be seen that, statistically, the figures are not at wide variance with each other. This does not relieve the limitation of generalization, however. The population used to norm SEAT was restricted to a limited geographical area. The population used for this study was much more limited in that it was comprised of college students enrolled in a specific course at The Ohio State University. Consequently, conclusions drawn from the results of this study are limited in application to the population observed.

Though, in each test of the specific null hypothesis, results of the study did not allow rejection of that null hypothesis, conclusions may be drawn while keeping in mind that the null hypotheses have not been proven.

Conclusions arrived at through the study are:

1. No significant relationship has been identified which indicates prior members of the designated organizations demonstrate higher levels of environmental concern than those individuals who have not experienced this membership. Several alternate explanations for this observation can be offered:

    a. Specific environmental concerns typifying members of the specified groups were not included in the array of concerns targeted by the SEAT instrument.

b. Since the mean score of all groups, including prior non-members exceed the absolute median value of the test (52.5), the environmental concern among the population is at an elevated level where prior membership is one of many factors working to generate this awareness, lack of it not being influential enough to produce significant difference.

c. Membership in the selected organizations has no significant effect on environmental attitudes maintained after leaving the organization.

2. No significant difference was found to exist in the scores of prior members of any group when compared to scores of prior members of other specific groups, multiple members as a group, and prior non-members as a group. Alternative explanations for this observation are substantially the same as those offered in "Conclusion 1" (above). An additional observation is of interest in this statistical analysis: multiple membership produced no significant difference when compared to other membership alternatives. This observation allows the inference that multiple membership produces no significant additive effect on environmental attitudes.

3. No significant correlation was found to exist between duration of membership in an organization and attitude scores as measured by the SEAT instrument. Alternative explanations for this lack of covariation offered by the study are:

a. Specific environmental concerns typifying members of the specific groups were not included in the array of concerns targeted by the SEAT instrument.

b. Extent of time spent as a member has no relationship to environmental attitudes maintained after leaving the specific organization.

Implications for the Environmental Communicator

On the basis of these findings, an environmental communicator wishing to target a significant portion of the study population would find prior membership in the specified youth organizations to be of little consequence in the identification of individuals bearing environmental attitudes significantly more favorable than the general population. For the communicator, the common denominator of prior membership has not been demonstrated to be characterized by attitudes which would indicate this public as an audience significantly more receptive to environmental messages than the population as a whole.

RECOMMENDATIONS

The following recommendations for further study of this subject are made:

1. The population studied was small and localized. It was atypical in that it was drawn from a university, from a specific class. Further investigation with more adequate sampling of the population at large would provide a basis for more significant analysis and broader generalization.

2. No inquiry was made in this investigation to determine the relevancy of membership to the individual. An indication of the intensity of group identification, impressions of the leadership provided, etc., may indicate relationships missed by this study.

3. The instrument employed did not allow for expression of intensity of attitude. A similar investigation utilizing an

instrument employing a Likert Scale or Semantic. Differential may allow these shadings to be quantified and analyzed.

APPENDIX A

CORRESPONDENCE

124 W. 17th Ave.
Division of Environmental
Education
The Ohio State University
Columbus, Ohio 43210

Dear :

I am in need of some information which your office may be able to provide me. This information is to be used in a Master's Thesis Study at Ohio State University.

The thrust of this study will be to examine the environmental awareness carried over into young adulthood by former members of several outdoor-oriented youth organizations.

is one of the organizations I wish to consider in this study, especially in view of its well-recognized environmental programs and its highly regarded efforts to educate young people in environmentally sound attitudes.

The information I need to complete this investigation is essentially those data pertaining to the desired outcomes and objectives of your environmental/conservation/outdoor education program, particularly that which your professional staff has prepared.

Thank you for assisting me in this investigation.

Sincerely,

Richard A. Ellis

(fascimile of letter mailed to Central offices of : Girl Scouts; Boy Scouts; and Camp Fire Girls, Jan. 20, 1976. 4-H contacted in person at Ohio Cooperative Extension Offices, The Ohio State University.)

Girl Scouts of the United States of America

NATIONAL HEADQUARTERS
[illegible] THIRD AVENUE
NEW YORK, NEW YORK [illegible]
[illegible]
CABLE CODE "GIRLSCOUTS, N.Y."

51/1136.1
February 17, 1976

Richard A. Ellis
Ohio State University
Division of Environmental Education
124 West 17th Avenue
Columbus, Ohio 43210

Dear Mr. Ellis:

I have received your January 20 letter.

The Outdoor Education Unit of the Program Department here at GSUSA is currently in the process of preparing a statement of behavioral objectives for our new programs. Therefore, I cannot send you this information. But you may find some helpful information in the Girl Scout Handbooks. Let me suggest that you contact Seal of Ohio Girl Scout Council, P. O. Box 24, 1295 Hobbard Road, Gallaway, Ohio 43215 to borrow copies.

I have enclosed for your information a copy of Blueprints for Action. I will send you a copy of our newest publication, Tuning In To Wildlife under separate cover.

Good luck with your research.

Sincerely,

Heidi Hughes
Heidi Hughes
Specialist, Environmental Education

HH/bc

FOUNDED MARCH [illegible]
CHARTERED BY CONGRESS MARCH [illegible]

BOY SCOUTS OF AMERICA
North Brunswick • New Jersey 08902 • USA • Telephone 201 249-6000 • Telex 13-8815 • Cable BOYSCAMER

February 11, 1976

Mr. Richard A. Ellis
Ohio State University
Division of Environmental Education
124 West 17th Avenue
Columbus, Ohio 43210

Dear Mr. Ellis:

I am enclosing some printed materials that set forth the objectives of various ecology/conservation programs of the BSA.

Probably the mission of the Conservation Committee best demonstrates our objectives, along with the objectives of the ecology workshops.

To sum them up, our objectives are very similar to Barry Commoner's four laws of ecology as set forth in CLOSING CIRCLE. As a result of going through Scouting, we would hope that boys would develop an understanding of:

1. Everything is connected to everything else.
2. Everything must go somewhere.
3. Nature knows best.
4. There is no such thing as a free lunch.

Your study sounds like something that could be very useful to the BSA. I can see where it could reinforce our ideas of what good our program is, or on the other hand, it could show us where improvements should be made.

Sincerely,

Ted S. Pettit
Director
Conservation Service

agr

enclosures

No reply received from Camp Fire Girls, Inc.

APPENDIX B

PERSONAL DATA QUESTIONNAIRE, ANSWER SHEET, AND SYRACUSE ENVIRONMENTAL AWARENESS TESTS, LEVEL III, FORM D AS ADMINISTERED.

The following questions provide data necessary for statistical analysis. Your name is not necessary or requested for this study and no attempt will be made to associate this data with any individual.

IT IS IMPORTANT THAT ALL QUESTIONS BE ANSWERED.

1. What size community did you spend most of your life in? (Circle appropriate number.)
    1. Larger than 200,000.
    2. Between 40,000 and 200,000.
    3. Less than 40,000.
    4. Rural.
2. What is your age? ______
3. What is your sex? (Circle appropriate number.)
    1. Male.
    2. Female.
4. What is your college accumulative average? ______
5. What year of college are you now in? (Circle appropriate number.)
    1. Freshman
    2. Sophomore
    3. Junior
    4. Senior
    5. Graduate
    6. CED
6. What is your major? ____________________________
7. In high school, were you a member of--(Circle appropriate number/s.)
    1. Hi-Y
    2. Y-Teens
    3. National Honor Society
    4. Other high school clubs
    5. Never a member of a high school club.
8. If you were a member of a high school club, how many years were you affiliated?
    1. Hi-Y ______ yrs.
    2. Y-Teens ______ yrs.
    3. National Honor Society ______ yrs.
    4. Other high school club ______ yrs.
    5. Never a member of a high school club ______ (Check if applicable.)

(PLEASE GO TO NEXT PAGE.)

9. Were you ever a member of--(Circle appropriate number/s.)

    1. Girl Scouts
    2. Boy Scouts
    3. Campfire Girls
    4. 4-H
    5. Never a member of any of the above.

10. How many years affiliated with the following?

    1. Girl Scouts ______yrs.
    2. Boy Scouts ______yrs.
    3. Campfire Girls ______yrs.
    4. 4-H ______yrs.

11. What grade, rank, or level did you achieve (if applicable) in these organizations?

    1. Girl Scouts ________________________________
    2. Boy Scouts ________________________________
    3. Campfire Girls ________________________________
    4. 4-H ________________________________
    5. Never a member of any of the above________(Check if applicable.)

12. Were you ever a member of--(Circle appropriate number.)

    1. Young Republicans.
    2. Young Democrats.
    3. Other political youth organizations.
    4. Never a member of a political youth organization.

13. Would you describe yourself as voting predominantly--(Circle appropriate number.)

    1. Democrat
    2. Republican
    3. Other
    4. Independent

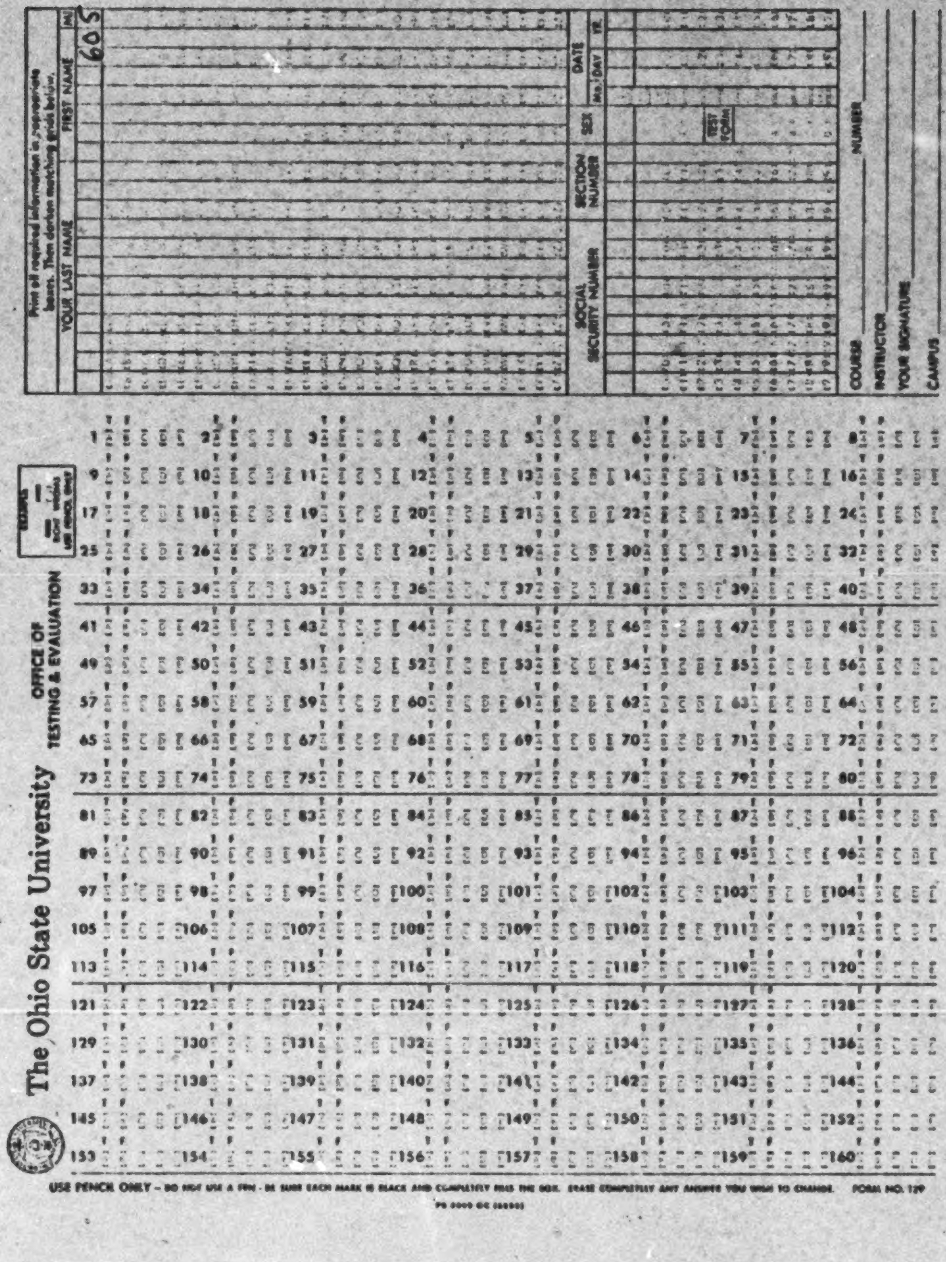
14. Do you have--(Circle appropriate number.)

    1. No brothers or sisters.
    2. One brother or sister.
    3. Two brothers or sisters.
    4. Three brothers or sisters.
    5. More than three brothers or sisters.

15. In high school, did you participate in (Circle appropriate number/s.)

    1. Intramural sports.
    2. Interscholastic sports.
    3. Did not participate in sports.

(PLEASE CONTINUE TO MAIN QUESTIONNAIRE. YOUR PARTICIPATION IS APPRECIATED.)



The Ohio State University

OFFICE OF TESTING & EVALUATION

EXAMPLE

RIGHT WRONG

USE PENCIL ONLY

Print all required information in appropriate boxes. Then darken matching grids below.

YOUR LAST NAME

FIRST NAME

MI

605

SOCIAL SECURITY NUMBER

SECTION NUMBER

SEX

DATE

Mo. DAY YR.

TEST FORM

COURSE

NUMBER

INSTRUCTOR

YOUR SIGNATURE

CAMPUS

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16
17	18	19	20	21	22	23	24
25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48
49	50	51	52	53	54	55	56
57	58	59	60	61	62	63	64
65	66	67	68	69	70	71	72
73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88
89	90	91	92	93	94	95	96
97	98	99	100	101	102	103	104
105	106	107	108	109	110	111	112
113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128
129	130	131	132	133	134	135	136
137	138	139	140	141	142	143	144
145	146	147	148	149	150	151	152
153	154	155	156	157	158	159	160

USE PENCIL ONLY – DO NOT USE A PEN. BE SURE EACH MARK IS BLACK AND COMPLETELY FILLS THE GRID. ERASE COMPLETELY ANY ANSWER YOU WISH TO CHANGE. FORM NO. 129

GENERAL DIRECTIONS:

This survey consists of 105 paired statements. Some describe things that you think are important; others describe things that you believe are important enough for you to do something about them. Look at the example below.

It is important to me to:

1) eliminate air pollution from our major cities.
2) develop recycling techniques for solid waste.

Which of these two statements is more important to you? If it is more important to you to "eliminate air pollution from our major cities? than to "develop recycling techniques for solid waste," then you should mark 1 on the answer sheet. If it is more important to you to "develop recycling techniques for solid waste," then you should mark 2.

Sometimes 1 and 2 may both seem to be equally important. In this case, you should choose the one that, on reflection, is a little bit more important to you. Make this choice even though the two options are so close that you can hardly express a preference. DO NOT OMIT ANY ITEMS.

Some of the pairs of statements describe actions which you might be willing to undertake because of your concern about certain issues. Look at the following example:

I would rather picket a company that pollutes:

1) water in my area.
2) air in my area.

Which of these activities would you be more willing to do? You may actually be against picketing for ANY purpose. However, which cause is the more important to you and would be your choice if you HAD to serve as a picket? Again, choose the one you prefer. DO NOT SKIP ANY ITEMS.

Work carefully and quickly. Do not spend too much time on any one question. After you are finished, go back and be certain that you have NOT skipped any of the items.

Mark your answers on the answer sheet provided. Be sure your marks are HEAVY and BLACK. Erase completely any answer you wish to change. Do not mark on this test booklet.

1. I would rather watch a television program about
   1) defense spending
   2) air pollution

2. I would rather listen to someone who calls on the phone to tell me about
   1) inflation
   2) land pollution

3. I would rather watch a television program about
   1) noise pollution
   2) war

4. I would rather circulate a petition calling for
   1) limits on the amount of water a company can use
   2) stronger auto safety regulations

5. I would rather circulate a petition about
   1) defense spending
   2) population problems

6. I would rather sign a petition
   1) to reduce a technology growth problem
   2) for better crime control

7. I would rather write my congressman asking for
   1) restriction on the cutting down of forests
   2) changes in foreign policy

8. I would rather donate a large part of the money I earn to
   1) an ecology society
   2) disaster relief

9. I would rather donate 10% of my income to
   1) a fund for assistance to underprivileged children
   2) Planned Parenthood

10. I would rather sign a petition to
    1) reduce the noise level in my area
    2) change policy on educational spending in my area

11. I would rather donate 10% of my income to
    1) the American Cancer Society
    2) a group crusading for cleaner air

12. I would rather make a speech in favor of banning
    1) welfare cuts
    2) strip mining which ruins the land

13. I would rather picket a government agency asking them to do something about
    1) sewage dumped into water near my hone
    2) the welfare program in my area

14. It is more important to me to
    1) increase the welfare budget
    2) develop more efficient waste disposal systems

15. I would rather sign a petition to
    1) stop highway construction through a park near my home
    2) change policy on educational spending in my area

16. I would rather watch a television program
    1) which deals with drug abuse
    2) about water pollution

17. I would rather call a local politician to complain about
    1) a case of air pollution
    2) his position on welfare

18. I would rather donate 10% of my income to
    1) the American Cancer Society
    2) a noise reduction program

19. I would rather watch a television program
    1) which deals with drug abuse
    2) about the dangers of technological growth

20. I would rather go door-to-door to convince people to
    1) avoid using plastic containers
    2) vote for a specific political candidate

21. I would rather listen to some who calls on the phone to tell me about
    1) a local political problem
    2) population problems

22. I would rather sign a petition complaining about
    1) burning trash at the city (town) dump
    2) narcotics abuse in my community

23. It is more important to me to
    1) reduce noise from aircraft
    2) campaign for my political favorite

24. I would rather donate 10% of my income to
    1) Planned Parenthood
    2) the American Heart Fund

25. I would rather donate 10% of my income to
    1) The Lighthouse for the Blind
    2) a group for preservation of endangered species

26. It is more important to me to
    1) campaign for my political favorite
    2) limit America's industrial expansion

27. It is more important to me to
    1) fight pollution in the Great Lakes
    2) reduce federal income taxes

28. It is more important to me to provide funds
    1) for drug rehabilitation centers
    2) to reduce land pollution

29. I would rather picket a factory that
    1) treats its employees in a very unfair fashion
    2) badly damages the environment

30. I would rather watch a television program about
    1) the dangers of technological growth
    2) poverty in America

31. I would rather listen to someone who calls on the phone to tell me about
    1) population problems
    2) inflation

32. I would rather hear a talk about
    1) civil rights
    2) water pollution

33. I would rather listen to someone who calls on the phone to tell me about
    1) a local political problem
    2) noise pollution

34. I would rather watch a television program about
    1) land pollution
    2) civil rights

35. I would rather make a speech
    1) to a group asking for stronger air pollution controls
    2) asking for an increase or a decrease in foreign aid

36. I would rather telephone people in my area about
    1) air pollution
    2) the need for a narcotics treatment center

37. I would rather read a leaflet about
    1) avoiding land pollution
    2) stronger auto safety regulations

38. I would rather stand on a corner to get signatures
    1) for a petition advocating my position on education
    2) in support of antinoise legislation

39. I would rather read a leaflet telling me how to
    1) beat inflation
    2) avoid polluting the water

40. I would rather sign a petition which deals with
    1) the problems of population in America
    2) drug abuse

41. I would rather read a pamphlet about the
    1) necessity to support actively one's favorite political candidate
    2) dangers of technological growth

42. I would rather donate some money to
    1) medical research
    2) preserve vanishing species of wildlife

43. I would rather stand on a corner to get signatures for a petition
    1) advocating my position on civil rights
    2) supporting a law which bans DDT

44. I would rather watch a television program about
    1) population problems
    2) inflation

45. I would rather picket a government agency to stop
    1) overspending
    2) construction of an airport near a populated area

46. I would rather read a leaflet telling me how to
    1) avoid polluting the air
    2) beat inflation

47. I would rather sign a petition complaining about
    1) use of plastic containers
    2) narcotics abuse

48. I would rather donate 10% of my income to a
    1) drug rehabilitation program
    2) clean water association

49. I would rather volunteer to phone people about
    1) reducing the growth of industry
    2) joining the Committee for Peace

50. I would rather write a community official asking for
    1) drug rehabilitation programs in my community
    2) more park and recreation land in my community

51. I would rather hear a talk about
    1) water pollution
    2) defense spending

52. I would rather watch a television program about
    1) urban renewal
    2) air pollution

53. It is more important to me to
    1) provide the funds for drug rehabilitation centers
    2) control the noise level from aircraft

54. I would rather circulate a petition about
    1) the dangers of technological growth
    2) civil rights

55. I would rather make a speech in favor of banning
    1) racial discrimination
    2) strip mining that ruins the land

56. I would rather make a speech urging people to
    1) have no more than two children
    2) fight tax increases

57. I would rather listen to someone who calls on the phone to tell me about
    1) a local political problem
    2) air pollution

58. It is more important to me to
    1) curb inflation
    2) control the noise level from aircraft

59. I would rather listen to someone who calls on the phone to tell me about
    1) civil rights
    2) population problems

60. I would rather make a speech about the necessity to
    1) stop mercury poisoning of water life
    2) support actively my political favorite

61. I would rather listen to someone who telephones about
    1) the dangers of technological growth
    2) inflation

62. I would rather watch a television program about
    1) water pollution
    2) urban renewal

63. I would rather donate 10% of my income to
    1) a group starting a recycling operation
    2) The American Heart Fund

64. I would rather watch a television program about
    1) mercury poisoning from fish
    2) inflation

65. I would rather write to my congressman
    1) asking for changes in Defense Department spending
    2) about the dangers of technological growth

66. I would rather make a speech
    1) in favor of banning welfare cuts
    2) urging people to have no more than two children

67. I would rather listen to someone who calls on the phone to tell me about
    1) water pollution
    2) a local political problem

68. I would rather make a speech supporting a new
    1) antinoise law
    2) crime control law

69. I would rather listen to someone who calls on the phone to tell me about
    1) a local political problem
    2) land pollution

70. I would rather boycott a company which
    1) violates laws against discrimination in hiring
    2) severely pollutes the air

71. I would rather listen to someone who calls on the phone to tell me about
    1) inflation
    2) air pollution

72. I would rather watch a television program about
    1) urban renewal
    2) land pollution

73. I would rather donate 10% of my income to a/an
    1) organization compaigning against noise pollution
    2) fund for job training for poor

74. I would rather sign a petition calling for
    1) a new sewage treatment plant
    2) reduced taxes

75. I would rather watch a television program about
    1) urban renewal
    2) population problems

76. I would rather make a speech
    1) in favor of my community stopping industrial expansion
    2) urging people to fight tax increases

77. I would rather write my congressman about
    1) preserving more of American forests and natural beauty
    2) my position on war

78. I would rather stand on a corner to get signatures
    1) supporting a law which bans DDT
    2) for a petition advocating my position on education

79. I would rather write my congressman about my position on
    1) war
    2) population problems

80. It is more important to me to
    1) reduce noise pollution
    2) increase aid to America's poor

81. I would rather watch a television program about
    1) inflation
    2) air pollution

82. I would rather watch a television program about
    1) defense spending
    2) land pollution

83. I would rather stand on a corner to get signatures
    1) supporting a law which bans detergents that pollute water
    2) for a petition advocating my position on education

84. I would rather join a demonstration to stop
    1) a meeting of a violence action group in my town or city
    2) industrial expansion in my town or city

85. It is more important to me to
    1) restore the ecological balance in the Great Lakes
    2) maintain a strong national defense

86. I would rather watch a television program about
    1) war
    2) water pollution

87. I would rather read a leaflet telling me how to
    1) avoid polluting the air
    2) lower taxes

88. I would rather sign a petition calling for
    1) better crime control
    2) a new antinoise law

89. I would rather donate 10% of my income to a
    1) drug rehabilitation center
    2) group starting a recycling operation

90. I would rather sign a petition about
    1) land pollution
    2) civil rights

91. I would rather volunteer to work Saturdays
    1) to promote my views about war
    2) at Planned Parenthood

92. I would rather sign a petition
    1) calling for stricter laws controlling pollution from automobile exhausts
    2) to change a policy on educational spending in my area

93. I would rather sign a petition complaining about
    1) excessive noise in my community
    2) narcotics abuse in my community

94. I would rather go to a film that describes the tragic results of
    1) overpopulation
    2) war

95. I would rather watch a television program about
    1) war
    2) mercury poisoning from fish

96. I would rather sign a petition
    1) to change policy on educational spending in my area
    2) about the dangers of technological growth

97. I would rather listen to someone who calls on the phone to tell me about
    1) water pollution
    2) civil rights

98. I would rather read a leaflet telling me how to
    1) lower taxes
    2) avoid polluting the land

99. It is more important to me to
    1) campaign for my political favorite
    2) save the coral reefs along our coast lines

100. I would rather sign a petition about
    1) the dangers of technological growth
    2) war

101. I would rather read a pamphlet about
    1) population problems
    2) civil rights

102. I would rather donate 10% of my income to
    1) The Committee for Peace
    2) cleaning up oil-soaked beaches

103. It is more important to me to
   1) rehabilitate slums in inner cities
   2) reduce noise from aircraft

104. I would rather make a speech in favor of banning
   1) strip mining which ruins the land
   2) education cuts

105. I would rather make a speech calling for stricter
   1) laws controlling pollution from automobile exhausts
   2) drug laws in my community

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